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PCT/KR2004/003420

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1/39

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SEQUENCE LISTING

<110> TOOLGEN, INC.

<120> REGULATION OF PROKARYOTIC GENE
EXPRESSION WITH ZINC FINGER PROTEINS

<130> PCA41174-TG1

<150> US 60/532,362
<151> 2003-12-23

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<170> FastSEQ for Windows Version 4.0

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Thr Arg His Gln Arg Ile His
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Asn Val His Arg Arg Ile His

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Thr Arg His Arg Arg Ile His
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<400> 34

Tyr Glu Cys Asp His Cys Gly Lys Ala Phe Ser Val Ser Ser Asn Leu
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Thr Arg His Arg Arg Ile His
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Phe Glu Cys Lys Asp Cys Gly Lys Ala Phe Ile Gln Lys Ser Asn Leu
1 5 10 15
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Lys Thr His Thr Arg Thr His

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<210> 42

<211> 23

<212> PRT

<213> Homo sapiens

<400> 42

Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Thr Gln Ser Ser Asn Leu
1 5 10 15
Thr Lys His Lys Lys Ile His
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<210> 43

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<212> PRT

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<400> 43

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1 5 10 15
Thr Arg His Arg Arg Ile His
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<211> 80

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated peptide

<400> 44

Tyr Lys Cys Met Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu
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20 25 30
Val Cys Gly Lys Ala Phe Arg His Ser Ser Ser Leu Val Arg His Gln
35 40 45
Arg Thr His Thr Gly Glu Lys Pro Tyr Arg Cys Lys Tyr Cys Asp Arg
50 55 60
Ser Phe Ser Ile Ser Ser Asn Leu Gln Arg His Val Arg Asn Ile His
65 70 75 80

<210> 45

<211> 80

<212> PRT

<213> Artificial Sequence

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<400> 45

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1 5 10 15
Lys Gln His Thr Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Lys
20 25 30
Gln Cys Gly Lys Ala Phe Gly Cys Pro Ser Asn Leu Arg Arg His Gly
35 40 45
Arg Thr His Thr Gly Glu Lys Pro Tyr Arg Cys Lys Tyr Cys Asp Arg
50 55 60
Ser Phe Ser Ile Ser Ser Asn Leu Gln Arg His Val Arg Asn Ile His
65 70 75 80

<210> 46

<211> 108

<212> PRT

<213> Artificial Sequence

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<223> Synthetically generated peptide

<400> 46

Tyr Arg Cys Lys Tyr Cys Asp Arg Ser Phe Ser Ile Ser Ser Asn Leu
1 5 10 15
Gln Arg His Val Arg Asn Ile His Thr Gly Glu Lys Pro Phe Gln Cys
20 25 30
Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr His
35 40 45
Thr Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly
50 55 60
Lys Ser Phe Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His
65 70 75 80
Thr Gly Glu Lys Pro Tyr Glu Cys Asn Tyr Cys Gly Lys Thr Phe Ser
85 90 95
Val Ser Ser Thr Leu Ile Arg His Gln Arg Ile His
100 105

<210> 47

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated peptide

<400> 47

Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu
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20 25 30
His Cys Gly Lys Ala Phe Ser Val Ser Ser Asn Leu Asn Val His Arg
35 40 45
Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Glu Glu Cys Gly Lys

50 55 60
Ala Phe Thr Gln Ser Ser Asn Leu Thr Lys His Lys Lys Ile His Thr
65 70 75 80
Gly Glu Lys Pro Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Thr Gln
85 90 95
Ser Ser Asn Leu Thr Lys His Lys Lys Ile His
100 105

<210> 48

<211> 107

<212> PRT

<213> Artificial Sequence

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<400> 48
Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu
1 5 10 15
Lys Thr His Thr Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Asp
20 25 30
His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu Asn Val His Lys
35 40 45
Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys
50 55 60
Ser Phe Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His Thr
65 70 75 80
Gly Glu Lys Pro Tyr Lys Cys Pro Asp Cys Gly Lys Ser Phe Ser Gln
85 90 95
Ser Ser Ser Leu Ile Arg His Gln Arg Thr His
100 105

<210> 49

<211> 107

<212> PRT

<213> Artificial Sequence

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<400> 49
Tyr Arg Cys Glu Glu Cys Gly Lys Ala Phe Arg Trp Pro Ser Asn Leu
1 5 10 15
Thr Arg His Lys Arg Ile His Thr Gly Glu Lys Pro Tyr Glu Cys Asp
20 25 30
His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu Asn Val His Lys
35 40 45
Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Asp His Cys Gly Lys
50 55 60
Ala Phe Ser Val Ser Ser Asn Leu Asn Val His Arg Arg Ile His Thr
65 70 75 80
Gly Glu Lys Pro Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln

85 90 95
Ser Ser His Leu Asn Val His Lys Arg Thr His
100 105

<210> 50
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Thr Arg His Arg Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Met
20 25 30
Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu Thr Arg His Gln
35 40 45
Arg Ile His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys
50 55 60
Ser Phe Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His Thr
65 70 75 80
Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln
85 90 95
Ser Thr His Leu Thr Arg His Arg Arg Ile His
100 105

<210> 51
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<400> 51
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20 25 30
Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr
35 40 45
His Thr Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Asp His Cys
50 55 60
Gly Lys Ser Phe Ser Gln Ser Ser His Leu Asn Val His Lys Arg Thr
65 70 75 80
His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys Ser Phe
85 90 95
Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His
100 105

<210> 52

<211> 107

<212> PRT

<213> Artificial Sequence

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<400> 52

Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu
1 5 10 15
Thr Gln His Arg Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Met
20 25 30
Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu Thr Arg His Gln
35 40 45
Arg Ile His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys
50 55 60
Ser Phe Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His Thr
65 70 75 80
Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln
85 90 95
Ser Thr His Leu Thr Arg His Arg Arg Ile His
100 105

<210> 53

<211> 107

<212> PRT

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Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu
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Asn Val His Lys Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Asp
20 25 30
His Cys Gly Lys Ala Phe Ser Val Ser Ser Asn Leu Asn Val His Arg
35 40 45
Arg Ile His Thr Gly Glu Lys Pro Phe Glu Cys Lys Asp Cys Gly Lys
50 55 60
Ala Phe Ile Gln Lys Ser Asn Leu Ile Arg His Gln Arg Thr His Thr
65 70 75 80
Gly Glu Lys Pro Tyr Lys Cys Lys Gln Cys Gly Lys Ala Phe Gly Cys
85 90 95
Pro Ser Asn Leu Arg Arg His Gly Arg Thr His
100 105

<210> 54

<211> 107

<212> PRT

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Tyr Glu Cys Asp His Cys Gly Lys Ala Phe Ser Val Ser Ser Asn Leu
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Asn Val His Arg Arg Ile His Thr Gly Glu Lys Pro Tyr Glu Cys His
20 25 30
Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu Thr Arg His Arg
35 40 45
Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Pro Asp Cys Gly Lys
50 55 60
Ser Phe Ser Gln Ser Ser Leu Ile Arg His Gln Arg Thr His Thr
65 70 75 80
Gly-Glu-Lys-Pro-Phe-Gln-Cys-Lys-Thr-Cys-Gln-Arg-Lys-Phe-Ser-Arg
85 90 95
Ser Asp His Leu Lys Thr His Thr Arg Thr His
100 105

<210> 55

<211> 107

<212> PRT

<213> Artificial Sequence

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<400> 55

Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu
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Lys Thr His Thr Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Asp
20 25 30
His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu Asn Val His Lys
35 40 45
Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys
50 55 60
Ser Phe Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His Thr
65 70 75 80
Gly Glu Lys Pro Phe Glu Cys Lys Asp Cys Gly Lys Ala Phe Ile Gln
85 90 95
Lys Ser Asn Leu Ile Arg His Gln Arg Thr His
100 105

<210> 56

<211> 109

<212> PRT

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Ala Leu Ala Arg His Lys Arg Thr His Thr Gly Glu Lys Pro Phe Gln
20 25 30
Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr
35 40 45
His Thr Arg Thr His Thr Gly Glu Lys Pro Tyr Lys Cys Glu Glu Cys
50 55 60
Gly Lys Ala Phe Thr Gln Ser Ser Asn Leu Thr Lys His Lys Lys Ile
65 70 75 80
His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys Ser Phe
85 90 95
Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His
100 105

<210> 57

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<212> PRT

<213> Simian parainfluenza virus 5

<400> 57

Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser
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<212> PRT

<213> Artificial Sequence

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Glu Arg Pro Tyr Ala Cys Pro Val Glu Ser Cys Asp Arg Arg Phe Ser
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Arg Ser Asp Glu Leu Thr Arg His Ile Arg Ile His Thr Gly Gln Lys
20 25 30
Pro Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Arg Ser Asp His
35 40 45
Leu Thr Thr His Ile Arg Thr His Thr Gly Glu Lys Pro Phe Ala Cys
50 55 60
Asp Ile Cys Gly Arg Lys Phe Ala Arg Ser Asp Glu Arg Lys Arg His
65 70 75 80
Thr Lys Ile His Leu Arg Gln Lys Asp
85

<210> 59

<211> 28

<212> PRT

<213> Artificial Sequence

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<223> Xaa = phenylalanine or tyrosine

<221> VARIANT

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<223> Xaa = any amino acid

<221> VARIANT

<222> 19

<223> Xaa = hydrophobic residue

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Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa	His
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<212> PRT

<213> Homo sapiens

<400> 60

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Arg	Arg	His	Gly	Arg	Thr	His
				20		

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<212> PRT

<213> Homo sapiens

<400> 61

Tyr	Gln	Cys	Asn	Ile	Cys	Gly	Lys	Cys	Phe	Ser	Cys	Asn	Ser	Asn	Leu
1				5				10							15

His	Arg	His	Gln	Arg	Thr	His
				20		

<210> 62

<211> 23

<212> PRT

<213> Homo sapiens

<400> 62

Tyr	Ser	Cys	Gly	Ile	Cys	Gly	Lys	Ser	Phe	Ser	Asp	Ser	Ser	Ala	Lys
1				5				10							15

Arg	Arg	His	Cys	Ile	Leu	His
-----	-----	-----	-----	-----	-----	-----

20

<210> 63

<211> 23

<212> PRT

<213> Homo sapiens

<400> 63

Tyr Thr Cys Ser Asp Cys Gly Lys Ala Phe Arg Asp Lys Ser Cys Leu
1 5 10 15
Asn Arg His Arg Arg Thr His
20

<210> 64

<211> 23

<212> PRT

<213> Homo sapiens

<400> 64

Tyr Lys Cys Lys Glu Cys Gly Lys Ala Phe Asn His Ser Ser Asn Phe
1 5 10 15
Asn Lys His His Arg Ile His
20

<210> 65

<211> 23

<212> PRT

<213> Homo sapiens

<400> 65

Phe Lys Cys Pro Val Cys Gly Lys Ala Phe Arg His Ser Ser Ser Leu
1 5 10 15
Val Arg His Gln Arg Thr His
20

<210> 66

<211> 24

<212> PRT

<213> Homo sapiens

<400> 66

Tyr Arg Cys Lys Tyr Cys Asp Arg Ser Phe Ser Ile Ser Ser Asn Leu
1 5 10 15
Gln Arg His Val Arg Asn Ile His
20

<210> 67

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<212> PRT

<213> Homo sapiens

<400> 67

Tyr Glu Cys Asp His Cys Gly Lys Ala Phe Ser Ile Gly Ser Asn Leu
1 5 10 15
Asn Val His Arg Arg Ile His
20

<210> 68
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<213> Homo sapiens

<400> 68
Tyr Gly Cys His Leu Cys Gly Lys Ala Phe Ser Lys Ser Ser Asn Leu
1 5 10 15
Arg Arg His Glu Met Ile His
20

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Tyr Lys Cys Lys Glu Cys Gly Gln Ala Phe Arg Gln Arg Ala His Leu
1 5 10 15
Ile Arg His His Lys Leu His
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<400> 70
Tyr Lys Cys His Gln Cys Gly Lys Ala Phe Ile Gln Ser Phe Asn Leu
1 5 10 15
Arg Arg His Glu Arg Thr His
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<400> 71
Phe Gln Cys Asn Gln Cys Gly Ala Ser Phe Thr Gln Lys Gly Asn Leu
1 5 10 15
Leu Arg His Ile Lys Leu His
20

<210> 72
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<213> Homo sapiens

<400> 72

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1 5 10 15
Arg Arg His Glu Lys Thr His
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<210> 73

<211> 23

<212> PRT

<213> Homo sapiens

<400> 73

Tyr Lys Cys Gly Gln Cys Gly Lys Phe Tyr Ser Gln Val Ser His Leu
1 5 10 15
Thr Arg His Gln Lys Ile His
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<210> 74

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<212> PRT

<213> Homo sapiens

<400> 74

Tyr Ala Cys His Leu Cys Gly Lys Ala Phe Thr Gln Cys Ser His Leu
1 5 10 15
Arg Arg His Glu Lys Thr His
20

<210> 75

<211> 23

<212> PRT

<213> Homo sapiens

<400> 75

Tyr Ala Cys His Leu Cys Ala Lys Ala Phe Ile Gln Cys Ser His Leu
1 5 10 15
Arg Arg His Glu Lys Thr His
20

<210> 76

<211> 23

<212> PRT

<213> Homo sapiens

<400> 76

Tyr Val Cys Arg Glu Cys Gly Arg Gly Phe Arg Gln His Ser His Leu
1 5 10 15
Val Arg His Lys Arg Thr His
20

<210> 77
<211> 23
<212> PRT
<213> Homo sapiens

<400> 77
Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Arg Gln Ser Ser His Leu
1 5 10 15
Thr Thr His Lys Ile Ile His
20

<210> 78
<211> 23
<212> PRT
<213> Homo sapiens

<400> 78
Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu
1 5 10 15
Asn Val His Lys Arg Thr His
20

<210> 79
<211> 23
<212> PRT
<213> Homo sapiens

<400> 79
Tyr Met Cys Ser Glu Cys Gly Arg Gly Phe Ser Gln Lys Ser Asn Leu
1 5 10 15
Ile Ile His Gln Arg Thr His
20

<210> 80
<211> 23
<212> PRT
<213> Homo sapiens

<400> 80
Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Thr Gln Ser Ser Asn Leu
1 5 10 15
Thr Lys His Lys Lys Ile His
20

<210> 81
<211> 23
<212> PRT
<213> Homo sapiens

<400> 81
Phe Glu Cys Lys Asp Cys Gly Lys Ala Phe Ile Gln Lys Ser Asn Leu
1 5 10 15

Ile Arg His Gln Arg Thr His
20

<210> 82

<211> 23

<212> PRT

<213> Homo sapiens

<400> 82

Tyr Val Cys Arg Glu Cys Arg Arg Gly Phe Ser Gln Lys Ser Asn Leu
1 5 10 15

Ile Arg His Gln Arg Thr His
20

<210> 83

<211> 23

<212> PRT

<213> Homo sapiens

<400> 83

Tyr Glu Cys Glu Lys Cys Gly Lys Ala Phe Asn Gln Ser Ser Asn Leu
1 5 10 15

Thr Arg His Lys Lys Ser His
20

<210> 84

<211> 23

<212> PRT

<213> Homo sapiens

<400> 84

Tyr Glu Cys Asn Thr Cys Arg Lys Thr Phe Ser Gln Lys Ser Asn Leu
1 5 10 15

Ile Val His Gln Arg Thr His
20

<210> 85

<211> 23

<212> PRT

<213> Homo sapiens

<400> 85

Tyr Val Cys Ser Lys Cys Gly Lys Ala Phe Thr Gln Ser Ser Asn Leu
1 5 10 15

Thr Val His Gln Lys Ile His
20

<210> 86

<211> 23

<212> PRT

<213> Homo sapiens

<400> 86
Tyr Lys Cys Asp Glu Cys Gly Lys Asn Phe Thr Gln Ser Ser Asn Leu
1 5 10 15
Ile Val His Lys Arg Ile His
20

<210> 87
<211> 23
<212> PRT
<213> Homo sapiens

<400> 87
Tyr Glu Cys Asp Val Cys Gly Lys Thr Phe Thr Gln Lys Ser Asn Leu
1 5 10 15
Gly Val His Gln Arg Thr His
20

<210> 88
<211> 23
<212> PRT
<213> Homo sapiens

<400> 88
Tyr Glu Cys Val Gln Cys Gly Lys Gly Phe Thr Gln Ser Ser Asn Leu
1 5 10 15
Ile Thr His Gln Arg Val His
20

<210> 89
<211> 23
<212> PRT
<213> Homo sapiens

<400> 89
Tyr Lys Cys Pro Asp Cys Gly Lys Ser Phe Ser Gln Ser Ser Ser Leu
1 5 10 15
Ile Arg His Gln Arg Thr His
20

<210> 90
<211> 23
<212> PRT
<213> Homo sapiens

<400> 90
Tyr Glu Cys Gin Asp Cys Gly Arg Ala Phe Asn Gln Asn Ser Ser Leu
1 5 10 15
Gly Arg His Lys Arg Thr His
20

<210> 91
<211> 23

<212> PRT

<213> Homo sapiens

<400> 91

Tyr	Glu	Cys	Asn	Glu	Cys	Gly	Lys	Phe	Phe	Ser	Gln	Ser	Ser	Ser	Leu
1				5				10						15	
Ile	Arg	His	Arg	Arg	Ser	His									
								20							

<210> 92

<211> 23

<212> PRT

<213> Homo sapiens

<400> 92

Tyr	Lys	Cys	Glu	Glu	Cys	Gly	Lys	Ala	Phe	Asn	Gln	Ser	Ser	Thr	Leu
1				5				10						15	
Thr	Arg	His	Lys	Ile	Val	His									
								20							

<210> 93

<211> 23

<212> PRT

<213> Homo sapiens

<400> 93

Tyr	Glu	Cys	Asn	Glu	Cys	Gly	Lys	Ala	Phe	Ala	Gln	Asn	Ser	Thr	Leu
1				5				10						15	
Arg	Val	His	Gln	Arg	Ile	His									
								20							

<210> 94

<211> 23

<212> PRT

<213> Homo sapiens

<400> 94

Tyr	Glu	Cys	His	Asp	Cys	Gly	Lys	Ser	Phe	Arg	Gln	Ser	Thr	His	Leu
1				5				10						15	
Thr	Gln	His	Arg	Arg	Ile	His									
								20							

<210> 95

<211> 23

<212> PRT

<213> Homo sapiens

<400> 95

Tyr	Glu	Cys	His	Asp	Cys	Gly	Lys	Ser	Phe	Arg	Gln	Ser	Thr	His	Leu
1				5				10						15	
Thr	Arg	His	Arg	Arg	Ile	His									
								20							

<210> 96
<211> 22
<212> PRT
<213> Homo sapiens

<400> 96
His Lys Cys Leu Glu Cys Gly Lys Cys Phe Ser Gln Asn Thr His Leu
1 5 10 15
Thr Arg His Gln Arg Thr
20

<210> 97
<211> 25
<212> PRT
<213> Homo sapiens

<400> 97
Tyr Val Cys Asp Val Glu Gly Cys Thr Trp Lys Phe Ala Arg Ser Asp
1 5 10 15
Glu Leu Asn Arg His Lys Lys Arg His
20 25

<210> 98
<211> 25
<212> PRT
<213> Homo sapiens

<400> 98
Tyr His Cys Asp Trp Asp Gly Cys Gly Trp Lys Phe Ala Arg Ser Asp
1 5 10 15
Glu Leu Thr Arg His Tyr Arg Lys His
20 25

<210> 99
<211> 25
<212> PRT
<213> Homo sapiens

<400> 99
Tyr Arg Cys Ser Trp Glu Gly Cys Glu Trp Arg Phe Ala Arg Ser Asp
1 5 10 15
Glu Leu Thr Arg His Phe Arg Lys His
20 25

<210> 100
<211> 25
<212> PRT
<213> Homo sapiens

<400> 100
Phe Ser Cys Ser Trp Lys Gly Cys Glu Arg Arg Phe Ala Arg Ser Asp

1 5 10 15
Glu Leu Ser Arg His Arg Arg Thr His
20 25

<210> 101
<211> 25
<212> PRT
<213> Homo sapiens

<400> 101
Phe Ala Cys Ser Trp Gln Asp Cys Asn Lys Lys Phe Ala Arg Ser Asp
1 5 10 15
Glu Leu Ala Arg His Tyr Arg Thr His
20 25

<210> 102
<211> 25
<212> PRT
<213> Homo sapiens

<400> 102
Tyr His Cys Asn Trp Asp Gly Cys Gly Trp Lys Phe Ala Arg Ser Asp
1 5 10 15
Glu Leu Thr Arg His Tyr Arg Lys His
20 25

<210> 103
<211> 24
<212> PRT
<213> Homo sapiens

<400> 103
Phe Leu Cys Gln Tyr Cys Ala Gln Arg Phe Gly Arg Lys Asp His Leu
1 5 10 15
Thr Arg His Met Lys Lys Ser His
20

<210> 104
<211> 23
<212> PRT
<213> Homo sapiens

<400> 104
Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu
1 5 10 15
Lys Thr His Thr Arg Thr His
20

<210> 105
<211> 23
<212> PRT
<213> Homo sapiens

<400> 105
Phe Ala Cys Glu Val Cys Gly Val Arg Phe Thr Arg Asn Asp Lys Leu
1 5 10 15
Lys Ile His Met Arg Lys His
20

<210> 106

<211> 25

<212> PRT

<213> Homo sapiens

<400> 106

Tyr Val Cys Asp Val Glu Gly Cys Thr Trp Lys Phe Ala Arg Ser Asp
1 5 10 15
Lys-Leu-Asn-Arg-His-Lys-Lys-Arg-His
20 25

<210> 107

<211> 23

<212> PRT

<213> Homo sapiens

<400> 107

Tyr Lys Cys Met Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu
1 5 10 15
Thr Arg His Gln Arg Ile His
20

<210> 108

<211> 23

<212> PRT

<213> Homo sapiens

<400> 108

Tyr Ile Cys Arg Lys Cys Gly Arg Gly Phe Ser Arg Lys Ser Asn Leu
1 5 10 15
Ile Arg His Gln Arg Thr His
20

<210> 109

<211> 23

<212> PRT

<213> Homo sapiens

<400> 109

Tyr Leu Cys Ser Glu Cys Asp Lys Cys Phe Ser Arg Ser Thr Asn Leu
1 5 10 15
Ile Arg His Arg Arg Thr His
20

<210> 110

<211> 23

<212> PRT

<213> Homo sapiens

<400> 110

Tyr Glu Cys Lys Glu Cys Gly Lys Ala Phe Ser Ser Gly Ser Asn Phe
1 5 10 15

Thr Arg His Gln Arg Ile His
20

<210> 111

<211> 23

<212> PRT

<213> Homo sapiens

<400> 111

Tyr Glu Cys Asp His Cys Gly Lys Ala Phe Ser Val Ser Ser Asn Leu
1 5 10 15

Asn Val His Arg Arg Ile His
20

<210> 112

<211> 23

<212> PRT

<213> Homo sapiens

<400> 112

Tyr Thr Cys Lys Gln Cys Gly Lys Ala Phe Ser Val Ser Ser Leu
1 5 10 15

Arg Arg His Glu Thr Thr His
20

<210> 113

<211> 23

<212> PRT

<213> Homo sapiens

<400> 113

Tyr Glu Cys Asn Tyr Cys Gly Lys Thr Phe Ser Val Ser Ser Thr Leu
1 5 10 15

Ile Arg His Gln Arg Ile His
20

<210> 114

<211> 23

<212> PRT

<213> Homo sapiens

<400> 114

Tyr Arg Cys Glu Glu Cys Gly Lys Ala Phe Arg Trp Pro Ser Asn Leu
1 5 10 15

Thr Arg His Lys Arg Ile His

20

<210> 115
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Naturally occurring linker peptide

<221> VARIANT
<222> 3
<223> Xaa = Glu or Gln

<221> VARIANT
<222> 4
<223> Xaa = Lys or Arg

<221> VARIANT
<222> 6
<223> Xaa = Tyr or Phe

<400> 115
Thr Gly Xaa Xaa Pro Xaa
1 5

<210> 116
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetically generated peptide

<221> VARIANT
<222> 1, 13
<223> Xaa = phenylalanine or tyrosine

<221> VARIANT
<222> 2, 4-8, 10-14, 16, 20, 23-27
<223> Xaa = any amino acid

<221> VARIANT
<222> 19
<223> Xaa = a hydrophobic residue

<400> 116
Xaa Xaa Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Ser Asn
1 5 10 15
Xaa Xaa Arg His Xaa Xaa Xaa Xaa His
20 25

<210> 117
<211> 267
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetically generated oligonucleotide

<400>.117

atcgataagc taattctcac tcattaggca ccccaggctt tacactttat gcttccggct	60
cgtataatgt gtggatttgt gagcgatcaa caatitcaca caggaaacag cgtccatggg	120
taagcctatc cctaacccttc tcctcggtct cgattctaca caagctatgg gtgcctctcc	180
aaaaaaaagaag agaaaaggtag ctggatccac tagtaacggc cgccagtgtg ctggattct	240
gcagataatcc atcacactgg cggccgc	267

<210> 118
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> mutated sequence

<400> 118

Phe	Met	Cys	Thr	Trp	Ser	Tyr	Cys	Gly	Lys	Arg	Phe	Thr	Asp	Arg	Ser
1					5				10			15			
Ala	Leu	Ala	Arg	His	Lys	Arg	Thr	His							
					20				25						

<210> 119

<211> 23
<212> PRT
<213> Homo sapiens

<400> 119

Tyr	Lys	Cys	Lys	Gln	Cys	Gly	Lys	Ala	Phe	Gly	Cys	Pro	Ser	Asn	Leu
1					5				10			15			
Arg	Arg	His	Gly	Arg	Thr	His									
					20										

<210> 120

<211> 23
<212> PRT
<213> Homo sapiens

<400> 120

Tyr	Thr	Cys	Ser	Asp	Cys	Gly	Lys	Ala	Phe	Arg	Asp	Lys	Ser	Cys	Leu
1					5				10			15			
Asn	Arg	His	Arg	Arg	Thr	His									
					20										

<210> 121

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> mutated sequence

<400> 121

Tyr Ala Cys Pro Val Glu Ser Cys Asp Arg Arg Phe Ser Asp Ser Ser
1 5 10 15
Asn Leu Thr Arg His Ile Arg Ile His
20 25

<210> 122

<211> 23

<212> PRT

<213> Homo sapiens

<400> 122

Phe Lys Cys Pro Val Cys Gly Lys Ala Phe Arg His Ser Ser Ser Leu
1 5 10 15
Val Arg His Gln Arg Thr His
20

<210> 123

<211> 24

<212> PRT

<213> Homo sapiens

<400> 123

Tyr Arg Cys Lys Tyr Cys Asp Arg Ser Phe Ser Ile Ser Ser Asn Leu
1 5 10 15
Gln Arg His Val Arg Asn Ile His
20

<210> 124

<211> 23

<212> PRT

<213> Homo sapiens

<400> 124

Tyr Lys Cys His Gln Cys Gly Lys Ala Phe Ile Gln Ser Phe Asn Leu
1 5 10 15
Arg Arg His Glu Arg Thr His
20

<210> 125

<211> 23

<212> PRT

<213> Drosophila

<400> 125

Tyr Thr Cys Ser Tyr Cys Gly Lys Ser Phe Thr Gln Ser Asn Thr Leu
1 5 10 15
Lys Gln His Thr Arg Ile His
20

<210> 126
<211> 23
<212> PRT
<213> Homo sapiens

<400> 126
Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu
1 5 10 15
Asn Val His Lys Arg Thr His
20

<210> 127
<211> 23
<212> PRT
<213> Homo sapiens

<400> 127
Tyr Met Cys Ser Glu Cys Gly Arg Gly Phe Ser Gln Lys Ser Asn Leu
1 5 10 15
Ile Ile His Gln Arg Thr His
20

<210> 128
<211> 23
<212> PRT
<213> Homo sapiens

<400> 128
Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Thr Gln Ser Ser Asn Leu
1 5 10 15
Thr Lys His Lys Lys Ile His
20

<210> 129
<211> 23
<212> PRT
<213> Homo sapiens

<400> 129
Phe Glu Cys Lys Asp Cys Gly Lys Ala Phe Ile Gln Lys Ser Asn Leu
1 5 10 15
Ile Arg His Gln Arg Thr His
20

<210> 130
<211> 23
<212> PRT

<213> Homo sapiens

<400> 130

Tyr Val Cys Ser Lys Cys Gly Lys Ala Phe Thr Gln Ser Ser Asn Leu
1 5 10 15
Thr Val His Gln Lys Ile His
20

<210> 131

<211> 23

<212> PRT

<213> Homo sapiens

<400> 131

Tyr Lys Cys Pro Asp Cys Gly Lys Ser Phe Ser Gln Ser Ser Ser Leu
1 5 10 15
Ile Arg His Gln Arg Thr His
20

<210> 132

<211> 23

<212> PRT

<213> Homo sapiens

<400> 132

Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu
1 5 10 15
Thr Gln His Arg Arg Ile His
20

<210> 133

<211> 23

<212> PRT

<213> Homo sapiens

<400> 133

Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu
1 5 10 15
Thr Arg His Arg Arg Ile His
20

<210> 134

<211> 23

<212> PRT

<213> Homo sapiens

<400> 134

Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu
1 5 10 15
Lys Thr His Thr Arg Thr His
20

<210> 135

<211> 25

<212> PRT

<213> Homo sapiens

<400> 135

Tyr Val Cys Asp Val Glu Gly Cys Thr Trp Lys Phe Ala Arg Ser Asp
1 5 10 15
Lys Leu Asn Arg His Lys Lys Arg His
20 25

<210> 136

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> mutated sequence

<400> 136

Phe Ala Cys Pro Glu Cys Pro Lys Arg Phe Met Arg Ser Asp Asn Leu
1 5 10 15
Thr Gln His Ile Lys Thr His
20

<210> 137

<211> 23

<212> PRT

<213> Homo sapiens

<400> 137

Tyr Lys Cys Met Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu
1 5 10 15
Thr Arg His Gln Arg Ile His
20

<210> 138

<211> 23

<212> PRT

<213> Homo sapiens

<400> 138

Tyr Ile Cys Arg Lys Cys Gly Arg Gly Phe Ser Arg Lys Ser Asn Leu
1 5 10 15
Ile Arg His Gln Arg Thr His
20

<210> 139

<211> 23

<212> PRT

<213> Homo sapiens

<400> 139
Tyr Glu Cys Asp His Cys Gly Lys Ala Phe Ser Val Ser Ser Asn Leu
1 5 10 15
Asn Val His Arg Arg Ile His
20

<210> 140

<211> 23

<212> PRT

<213> Homo sapiens

<400> 140

Tyr Thr Cys Lys Gln Cys Gly Lys Ala Phe Ser Val Ser Ser Ser Leu
1 5 10 15
Arg Arg His Glu Thr Thr His
20

<210> 141

<211> 23

<212> PRT

<213> Homo sapiens

<400> 141

Tyr Glu Cys Asn Tyr Cys Gly Lys Thr Phe Ser Val Ser Ser Thr Leu
1 5 10 15
Ile Arg His Gln Arg Ile His
20

<210> 142

<211> 23

<212> PRT

<213> Homo sapiens

<400> 142

Tyr Arg Cys Glu Glu Cys Gly Lys Ala Phe Arg Trp Pro Ser Asn Leu
1 5 10 15
Thr Arg His Lys Arg Ile His
20

<210> 143

<211> 12

<212> DNA

<213> Artificial Sequence

<220>

<223> putative target sequence

<400> 143

daadaaaath ga

12

<210> 144

<211> 13

<212> DNA
<213> Artificial Sequence

<220>
<223> putative target sequence

<221> misc_feature
<222> 10
<223> n = a,t,c or g

<400> 144
gyagrahgan ggk

13

<210> 145
<211> 12
<212> DNA

<213> Artificial Sequence

<220>
<223> putative target sequence

<400> 145
hgaatgag gt

12

<210> 146
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> putative target sequence

<400> 146
gragragggg ra

12

<210> 147
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> putative target sequence

<221> misc_feature
<222> 7
<223> n = a,t,c or g

<400> 147
grahganggg tc

12

<210> 148
<211> 12

<212> DNA
<213> Artificial Sequence

<220>
<223> putative target sequence

<400> 148
gragragggg ga

12

<210> 149
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> putative target sequence

<400> 149
gavgaaaath ga

12

<210> 150
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> putative target sequence

<221> misc_feature
<222> 1
<223> n = a,t,c or g

<400> 150
ngggyagraa at

12

<210> 151
<211> 13
<212> DNA
<213> Artificial Sequence

<220>
<223> putative target sequence

<221> misc_feature
<222> 10
<223> n = a,t,c or g

<400> 151
gaagrahgan ggk

13

<210> 152
<211> 12

<212> DNA

<213> Artificial Sequence

<220>

<223> putative target sequence

<221> misc_feature

<222> 7

<223> n = a,t,c or g

<400> 152

gradaanggg tc

12

<210> 153

<211> 12

<212>-DNA

<213> Artificial Sequence

<220>

<223> binding sequence

<221> misc_feature

<222> 10

<223> n = a, t, c, or g

<400> 153

gaagrahgan gg

12

<210> 154

<211> 189

<212> PRT

<213> Escherichia coli

<400> 154

Met	Lys	Arg	Leu	Ile	Val	Gly	Ile	Ser	Gly	Ala	Ser	Gly	Ala	Ile	Tyr
1				5			10						15		
Gly	Val	Arg	Leu	Leu	Gln	Val	Leu	Arg	Asp	Val	Thr	Asp	Ile	Glu	Thr
				20			25						30		
His	Leu	Val	Met	Ser	Gln	Ala	Ala	Arg	Gln	Thr	Leu	Ser	Leu	Glu	Thr
				35			40						45		
Asp	Phe	Ser	Leu	Arg	Glu	Val	Gln	Ala	Leu	Ala	Asp	Val	Thr	His	Asp
				50			55						60		
Ala	Arg	Asp	Ile	Ala	Ala	Ser	Ile	Ser	Ser	Gly	Ser	Phe	Gln	Thr	Leu
				65			70						75		80
Gly	Met	Val	Ile	Leu	Pro	Cys	Ser	Ile	Lys	Thr	Leu	Ser	Gly	Ile	Val
				85			90						95		
His	Ser	Tyr	Thr	Asp	Gly	Leu	Leu	Thr	Arg	Ala	Ala	Asp	Val	Val	Leu
				100			105						110		
Lys	Glu	Arg	Arg	Pro	Leu	Val	Leu	Cys	Val	Arg	Glu	Thr	Pro	Leu	His
				115			120						125		
Leu	Gly	His	Leu	Arg	Leu	Met	Thr	Gln	Ala	Ala	Glu	Ile	Gly	Ala	Val
				130			135						140		

Ile Met Pro Pro Val Pro Ala Phe Tyr His Arg Pro Gln Ser Leu Asp
145 150 155 160
Asp Val Ile Asn Gln Thr Val Asn Arg Val Leu Asp Gln Phe Ala Ile
165 170 175
Thr Leu Pro Glu Asp Leu Phe Ala Arg Trp Gln Gly Ala
180 185

<210> 155

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 155

ctggaaagaa ccggaagaga tgctg

25

<210> 156

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 156

tgaaacgact cattgttaggc atcag

25

<210> 157

<211> 12

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<221> misc_feature

<222> 7

<223> n = a,t,c or g

<400> 157

gctgranggg ah

12